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148

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/344,423 06/25/99 LI

H CRYO/US-2406

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QM02/0627

EXAMINER

DOERRLER, W

ART UNIT	PAPER NUMBER
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3744

3

DATE MAILED: 06/27/00

06-27-00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/344,423

Applicant(s)

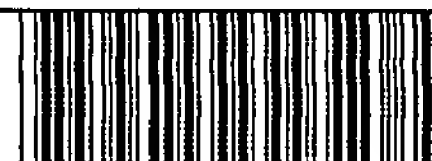
Li

Examiner

William C. Doerrler

Group Art Unit

3744



☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-13 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-8 and 10-13 is/are rejected.

☒ Claim(s) 9 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 3744

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2,4-8 and 10-13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Dobak et al '505.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dobak et al '505.

Dobak et al '505 discloses applicant's basic inventive concept, a two refrigerant Joule-Thomson probe with a flexible coaxial conduit to the cold end of the device, substantially as claimed with the exception of using pebax and polyimide for the outer and inner tubes, respectively, of the

Art Unit: 3744

coaxial conduit. Applicant has made no claim as to the invention of the materials. Both are known for their flexibility and insulation and heat transfer properties respectively, properties recognized for the tubing of Dobak, although no materials are given. As such, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the Joule-Thomson cooler of Dobak et al '505 by using pebax and polyimide for the outer and inner tubes, respectively to obtain a flexible conduit with limited heat transfer from ambient while establishing good heat transfer between the inner and outer fluid flows.

5. Claims 1-5,7,8,11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of Hersey or Liston in view of the PCT WO95/13025.

Hersey and Liston each disclose applicant's basic inventive concept, a two fluid Joule-Thomson cooling system with one fluid cooling the primary fluid, substantially as claimed with the exception of using the cooling device in a device for cryosurgery. The PCT reference shows this feature to be old in the Joule-Thompson cooling art. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention from the teaching of the PCT reference to modify the multiple fluid circuit Joule-Thomson device of either Hersey or Liston by using a two fluid system to provide a colder final temperature in a cryosurgery device to improve the functioning of the device by killing unwanted cells faster and with more precision.

Art Unit: 3744

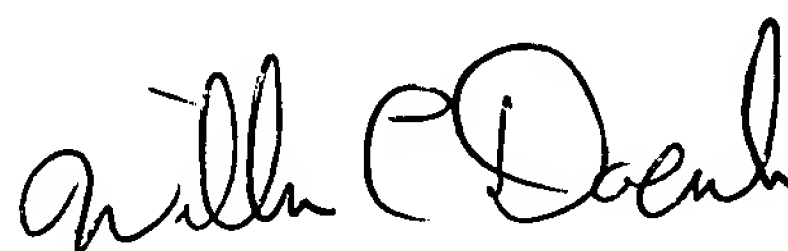
Allowable Subject Matter

6. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hamilton shows a cryogenic probe which uses thermoelectric elements to precool the incoming gas.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Doerrler whose telephone number is (703) 308-0696.



**WILLIAM DOERRLER
PRIMARY EXAMINER**

William C. Doerrler
Patent Examiner
TC 3744
June 26, 2000